

REMARKS

The Examiner has indicated that claims 2-9, 13 and 14 are allowable if rewritten in independent form. The Examiner has rejected claim 12 has been indicated as allowable when the rejection under 35 U.S.C. § 112, ¶ 2 is overcome.

The Examiner has rejected claims 1, 10 and 11 as anticipated by U.S. Patent No. 5,429,225 to Schiesser *et al.* ("Schiesser") under 35 U.S.C. § 102(b). In this response, Applicants have amended claims 10 and 12 and cancelled claim 11. Claim 12 was rewritten as an independent claim. As a result, claims 1 and 10 remain at issue.

The Examiner made the previous action final, and Applicant files herewith a Request for Continued Examination.

I. Rejection under 35 U.S.C. § 112, ¶ 2

The Examiner rejected claim 12 as not complying with 35 U.S.C. § 112, ¶ 2. Specifically, the Examiner noted that the term "dummy sensor" is not used in the specification. In response thereto, Applicant amends claim 12 to recite "dummy actuator" and not the term "dummy sensor". Applicants submit that this is merely a typographical error and that the scope of claim 12 is not narrowed by the present amendment.

II. Rejection under 35 U.S.C. § 102(b)

The Examiner has also rejected claims 1, 10 and 11 over the Schiesser reference under 35 U.S.C. § 102(b).

Claim 1 requires " wherein the actuator of at least one of the zones comprises means for providing a signal to an adjacent, upstream zone to begin conveying cartons *only when the*

sensor within the at least one zone senses the absence of a carton within that zone when the conveyor switches from an accumulation mode to a transportation mode."

Schiesser *does not* disclose an a sensor that sends a signal to an upstream zone to begin conveying when only when the sensor within the at least one zone senses the absence of a carton within that zone. On the contrary, Schiesser sends a signal to an upstream zone to begin conveying without knowing whether the cartons have cleared its zone because it begins retracting its sensor (thereby making it impossible to detect the presence of a carton) immediately upon receiving a signal from downstream to start conveying.

Considering Applicants above statement regarding Schiesser in detail and referring to Fig. 16A of Schiesser, let us assume that cartons are present on Zones C, B and A and they are accumulated and at rest. All three slider surfaces 80 and valves 62 are in the down position (held down by cartons present within the zones). All three sensors 42 are being urged up by springs and are being held down by cartons. Sensors 42 are thus sensing cartons in this mode.

Now, the conveyor begins to discharge. Tube 110 from farther downstream of Zone C pressurizes and urges the slider surface 80 and valve 62 in Zone C up. By the time 80 and 62 are fully raised, Zone C is driving cartons downstream and the valve button is being pushed by sensor arm 42. It is important to note that the valve button is being pushed by the sensor arm 42 regardless whether there is a carton overhead or not. Pushing the valve button in Zone C then pressurizes tube 110 feeding Zone B. This action then raises the parts in Zone B and pressurizes tube 110 feeding Zone A. All of this action takes place without ever really knowing whether the cartons in the zones ever moved or cleared their individual sensors. The valve buttons were pushed strictly because the valves were raised. As a result, cartons discharge in slugs with little if any space between them.

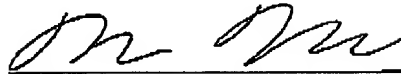
The only way the Schiesser patent can generate a gap between zone slugs is to place a restricted orifice in tube 110 to keep the actuators 74 from raising too quickly. However, the orifice must be sized taken into consideration the conveyor speed and conveyed product weight. Even when the orifice is correctly sized, the system of Schiesser does not begin conveying cartons only when the sensor in a downstream zone senses the absence of a carton within that zone, as required by claim 1, but rather either uses an orifice to delay the actuation of the upstream zone by some period of time or does not use an orifice and immediately begins conveying an upstream zone immediately. Either way, Schiesser does not does not begin conveying cartons only when the sensor in a downstream zone senses the absence of a carton within that zone, and Schiesser would never recognize when a carton is stalled or jammed over a sensor-roller.

Claim 10 contains a similar limitation to claim 1, which requires "switching a zone from an accumulation mode to a transportation mode only when an adjacent, downstream zone does not sense the presence of a carton within the adjacent, downstream zone." This limitation renders claim 10 patentable over Schiesser for the same reasons discussed above with respect to claim 1.

III. Conclusion

Based on the foregoing, the allowance of all of the claims is respectfully requested. If for any reason the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issues, the Examiner is requested to contact the undersigned attorney for the purpose of arranging such an interview.

Respectfully submitted,



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